Research Priority Matrix for Sarus Crane

Sarus Protection Society,

Uttar Pradesh

Identified and Prioritized Research Topics for Sarus Crane in Uttar Pradesh:

Using the criteria mandated by the Consultative group, the core group divided the final list of prioritized topics into two broad classes (i) **Ecology** and (ii) **Conservation**. These 13 topics are listed in the matrix as research priority 1 as E1, E2, E3 and C1, C2, C3 and so on based on the multiple times they have each been mentioned by individuals and thematic sub-groups in the consultative workshop. The other 20 suggested topics on ecology and biology, socio-ecological and human dimension, pollution and chemical impact and management related research, that do not find place in the priority 1 category have been recommended to be in the priority 2, and categorized in the matrix as research priority 2. They have also been listed as E.2.1, E.2.2 and C.2.1, C.2.2, C.2.3 and so on. A complete list of priority 1 and priority 2 suggested research topics are placed as under.

3.1 Priority 1 – Ecology & Biology Topics:

E.1. Assessment of current status and distribution of Sarus in different regions with special reference to habitat preference and utilization and development of a robust repeatability method for population trend monitoring.

E.2. Movement patterns and dispersal using marking and satellite telemetry

E.3. Study of factors causing mortality (dogs, transmission lines, chemicals, etc.).

E.4. Gather circumstantial evidences of chemical use. Also, collect information on common pests and pesticides used for the pests.

E.5 Nest distribution and breeding success in different regions and impact of chemicals.

E.6. Develop genetic data base for genetic studies using invasive and non-invasive methods.

E.7. Role of man-made water bodies and village ponds in the breeding

success of Sarus Cranes, and their use of these habitats in the non-breeding season.

E.8. Study water regimes and hydrology of individual wetlands as well as of watersheds at different scales in the context of Sarus and its habitat.

3.1.1 Priority 1 – Conservation Related Topics:

C.1 Factors causing wetland/ habitat attrition – climate change and anthropogenic factors.

C.2 Measuring attitudes of people towards Sarus:

- Receptiveness towards Sarus/ wetland retention/ restoration
- Belief systems of different communities
- Differences in administrative mechanisms
- Differences in approaches of wetland management of government agencies/ departments

C.3 Alternative uses of wetlands that favour maximum biodiversity and Sarus Crane abundance- exploring alternative livelihood sources.

C.4 Awareness among farmers regarding pesticide and chemical use.

C.5 Evaluation of multiple government departmental policy and actions with respect to wetland and Sarus Cranes in UP.

3.2 Other Identified Priority 2 - Research Topics:

3.2.1 Ecology and biology

E.2.1 Impact of land use and cropping pattern on population and demography of Sarus Cranes.

E.2.2 Health monitoring in different regions – ecto/ endo parasites etc on Sarus Cranes.

E.2.3 Pilot conservation breeding programme following IUCN protocols.

E.2.4 Study on trade of Sarus Cranes in different regions.

3.2.2 Socio-ecological and human dimension

C.2.1 Dependence on wetlands as extractive uses (keeping wetland intact/changing wetland structure)-importance of wetland produce.

C.2.2 Determination of impacts of differing kinds and quantum of wetland use and its effects on Sarus populations and demography and other biodiversity

C.2.3 Impact of human demography on persistence and quality of wetlands at the catchment levels (various scales). – potential variables of interest are human population density; differing uses; economic status; cultural/community structure

C.2.4 What do people need to be made aware of? An essential prerequisite to education/awareness programmes

3.2.3 Pollution and other impact research need

C.2.5 Document residue levels of legendry and contemporary chemicals in tissues of dead birds to identify the culprit chemical, usage pattern and policies

C.2.6 Assess antagonistic and synergistic effects of select pesticides and relate with disease and susceptibility

C.2.7 Assess breeding success and relate with residues in eggs, eggshell thickness)

C.2.8 Investigation on diseases such as avain flu, aspergillosis, botulism and other bacterial viral and fungal infections)

C.2.9 Studies on genotoxicity, ecto and endo parasitc levels.

C.2.10 Suggest alternate method for pest control

3.2.4 Management Related Research Needs:

C.2.11 Level of awareness among various govt agencies and RLBs Rural Local Bodies.

C.2.12 Effectiveness of existing wetland regulatory regime and possible reforms

C.2.13 Land tenure and status of Sarus habitat, classification, ownership of select wetlands.

C.2.14 Broad socio-economic values of wetland using existing study models

C.2.15 Sarus based tourism model development

C.2.16 Existing successful habitat management model for replication