Socio-Ecological Model for the conservation of species Case study of Green Munia (*Amandava formosa*)

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Introduction

Green Munia or Green Avadavat *Amandava formosa* categorized as the Vulnerable species as per the IUCN status. The distribution of this species in southern Rajasthan was quiet common when it comes to the habitats of Udaipur and neighbouring districts such as Sirohi, Rajsamand and Pali. The mostly preferred sites by this species were agricultural fields dominated by the grass species especially sugarcane fields. The Green Munia adapts varied range of habitats; and caging is considered as one of the most important causes of decrease in population, in general. Despite of above facts, the case of the decrease in population from habitats of southern Rajasthan was habitat alteration. In the 1990s, with the development and the changing in the agriculture pattern, the observations of decrease the population of many avifaunal species were observed. Same was the case of Green Munia. Except Abu Hills (Sirohi) and few agriculture habitat patches at the border areas of Udaipur, Pali and Rajsamand adjoining Kumbhalgarh, the frequently sighted Green Munia was suddenly gone down.

Southern Rajasthan: Habitats and species

While studying in the early half of 2010s (2002-2004), the authors found a fair population of Green Munia at Abu Hills (Sirohi) which was comparatively good from the other habitats of southern Rajasthan. It was further observed that the habitat alteration was main cause of decrease in population. Though trapping was also observed as per the interactions with the local trappers in year 2004. It was the year when a continuous monitoring process was initiated with the local youth of Abu Hills. Only ten potential sites were identified for regular monitoring, although few other sites too have the presence of the Green Munia. Thus, the period of five years (2002-07) was utilized to study the site, the challenges, designing the strategy and mainstreaming the local team.

The Challenges

The root cause of decreasing population of species was analyzed through interactions and discussions with local team of volunteers. Making use of the natural strengths of the birding, the trappers were mainstreamed towards conservation of habitats and target species. Habitat alteration especially encroachments of the feeding grounds and income generation through trapping were the prime challenges. The steps were initiated for the removal of the identified challenges. The natural skills of the local volunteers were value added with the modern tools and techniques of conservation practices for the period of two years (2005-06). The bird trade nexus was also identified from southern Rajasthan to Gujarat to Maharastra and outside.

Impact

With the strategic long-term program, the very first step was the livelihood linkages to avoid the conflicts of ecology and economics. The grass root members were identified and mainstreamed. The systematic monitoring of the population of the Green Munia at identified ten sites were undertaken from 2006 onwards.

Habitat protection: The temporary encroachments of the feeding sites were taken due consideration at the very first stage for the protection other than the roosting and breeding sites near human settlements. The interior sites (without or negligible human settlements) were only monitored from the bird catchers.

Green Munia: As per the crude method of counting the count at ten sites, the number was below 400 in the year 2004 which increased two and half folds by the end of 2010, i.e., 1,000. In the early half of the second decade (2010-15), the population count crossed 1,500 and till date (year 2018), the count has crossed 2,000 with the mass awareness on the importance of bird species for the locals.

Community participation: The most important attribute of involving common mass was "*Chalat musafir moh liyo re pnjare vaali munia...*", the song of Raj Kapoor's movie *Teesri Kasam*. The general mass realized the importance of their area for the little beauty and started towards its protection. The local youth and residents were mainstreamed for the conservation and the protection of the habitats and species. The selected youth were trained for the ecology of birds. The inherent knowledge of the nature wanderer were made use to keep watch and monitor regularly the target species. The single day earning was equated with few hours earning through birding and nature guiding. Thus, added advantages of five folds increase in the single day earning with the minimum efforts using the passion.

Green Munia – The Election Mascot: It is very heart whelming for the people when they find the outcome of the initiative actions towards conservation. The present Administrative Head (IAS) of the Sirohi District Mr. Surendra Singh Solanki had used his passion for the birds in the mass campaigning for increasing the the voting percentage by the slogan "Vote Green Munia". He put it as District Election Mascot in the Parliamentary Election Campaign 2019.

Acknowledgements

Though the list of saviours is big but few of the passionate lead workers regularly involved in nature trekking could be acknowledged for their contributions include Mr. Ajay Mehta, Mr. Pradeep Dave, Mr. Hemant Singh, Mr. Sandip, Mr. Salil Kalma, Mr. Premaram, etc. The then Forest Officials could be credited for the support especially Mr. Karan Singh Rathor along with the local media personals Mr. Kamlesh Prajapat, Mr. Parikshit Mishra and Mr. Navneet Ranjan. The organizations BNHS, Mumbai and WWF-India are duly credit for their support during the days of the assessment and execution of the steps.

Further readings

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To encourage the common mass for voting their rights to select the public representative for the Lok Sabha (Parliament) & to increase the voting percentage for Sirohi-Jalore Constituency, a slogan was launched "Vote Munia".







