

# Integrated Management Plan for Human-Blackbuck Conflict in Narayanpet District, Telangana

*Submitted by*



Salim Ali Centre for Ornithology and Natural History  
(Ministry of Environment, Forest and Climate  
Change, Govt. of India)

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# **Integrated Management Plan for Human-Blackbuck Conflict in Narayanpet District, Telangana**

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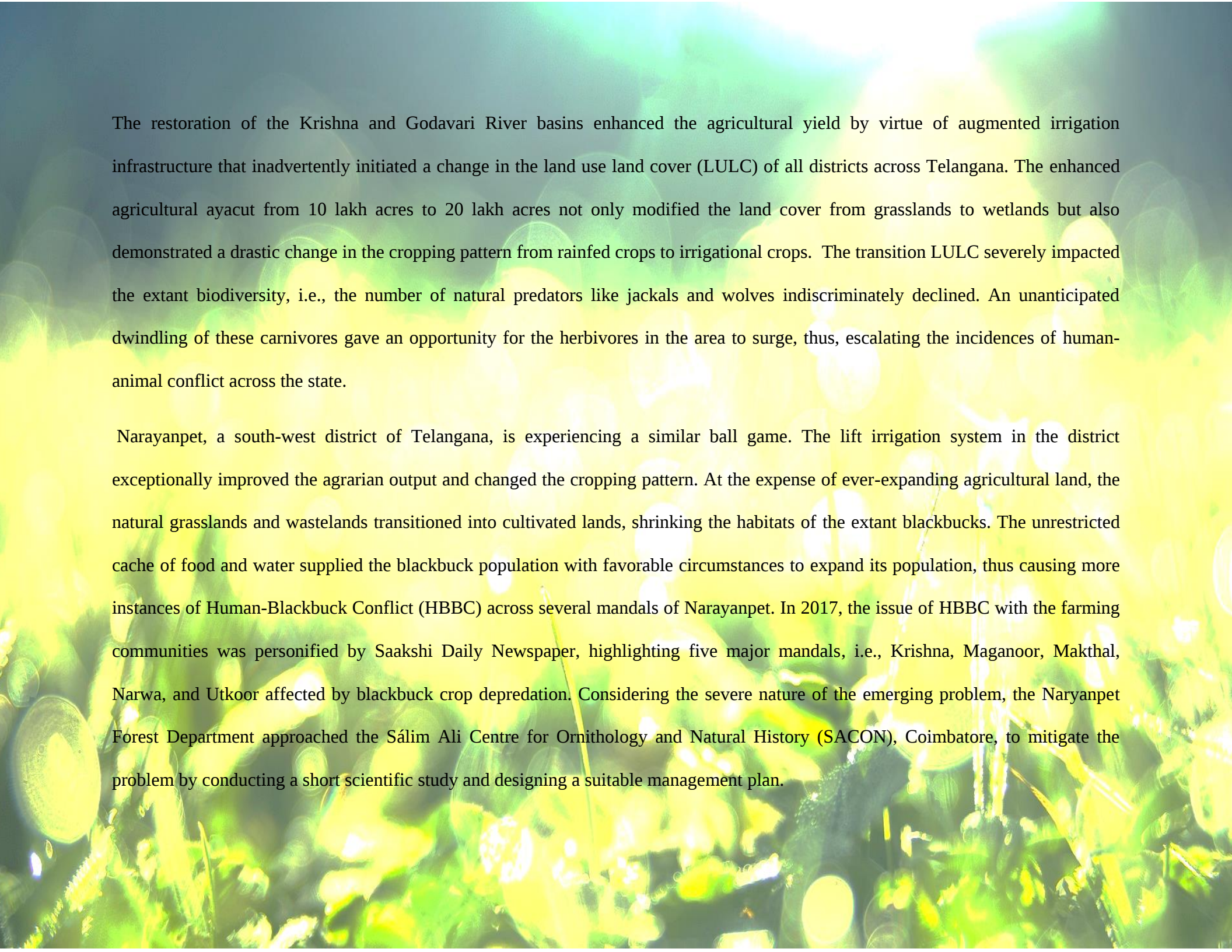
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# ***EXECUTIVE SUMMARY***



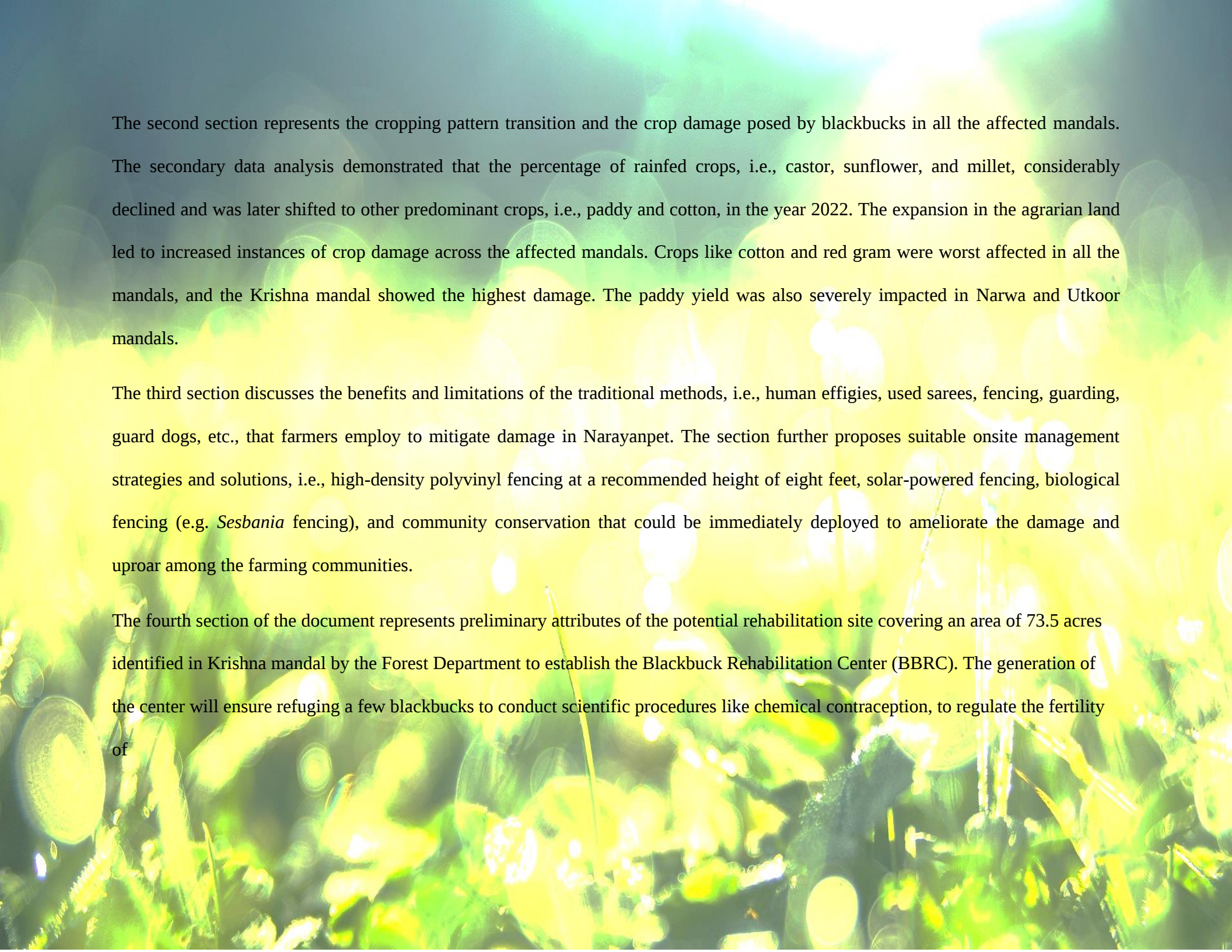


The restoration of the Krishna and Godavari River basins enhanced the agricultural yield by virtue of augmented irrigation infrastructure that inadvertently initiated a change in the land use land cover (LULC) of all districts across Telangana. The enhanced agricultural ayacut from 10 lakh acres to 20 lakh acres not only modified the land cover from grasslands to wetlands but also demonstrated a drastic change in the cropping pattern from rainfed crops to irrigational crops. The transition LULC severely impacted the extant biodiversity, i.e., the number of natural predators like jackals and wolves indiscriminately declined. An unanticipated dwindling of these carnivores gave an opportunity for the herbivores in the area to surge, thus, escalating the incidences of human-animal conflict across the state.

Narayanpet, a south-west district of Telangana, is experiencing a similar ball game. The lift irrigation system in the district exceptionally improved the agrarian output and changed the cropping pattern. At the expense of ever-expanding agricultural land, the natural grasslands and wastelands transitioned into cultivated lands, shrinking the habitats of the extant blackbucks. The unrestricted cache of food and water supplied the blackbuck population with favorable circumstances to expand its population, thus causing more instances of Human-Blackbuck Conflict (HBBC) across several mandals of Narayanpet. In 2017, the issue of HBBC with the farming communities was personified by Saakshi Daily Newspaper, highlighting five major mandals, i.e., Krishna, Maganoor, Makthal, Narwa, and Utkoor affected by blackbuck crop depredation. Considering the severe nature of the emerging problem, the Naryanpet Forest Department approached the Sálim Ali Centre for Ornithology and Natural History (SACON), Coimbatore, to mitigate the problem by conducting a short scientific study and designing a suitable management plan.

The integrated management plan designed by SACON aims to undertake on-site management, rehabilitation, and translocation of the free-roaming wild blackbuck population in Narayanpet. The project asserts to conserve and manage the increasing blackbuck population as part of the State's effort to regulate viable populations in Telangana. Besides this, the plan intends to provide efficient mitigation strategies, i.e., rehabilitation and translocation, followed by standardization of mitigation operations at State and Division levels with minimum damage to people and without impairing the viability of the affected blackbuck population. The extant population of blackbucks in Narayanpet is copious and flourishing interminably. Therefore, the unprecedented rise in the blackbuck population needs prompt conservation action plans, and some key issues like the size of enclosure for rehabilitation area and limited experience of best practices for blackbuck translocation, need to be addressed. The realization of the need for a coordinated and collaborative effort to address the aforementioned issues, an integrated management and translocation plan for blackbuck in Narayanpet has been prepared. The actions, specific steps and HBBC mitigation measures furnished in the document are to be used in the field.

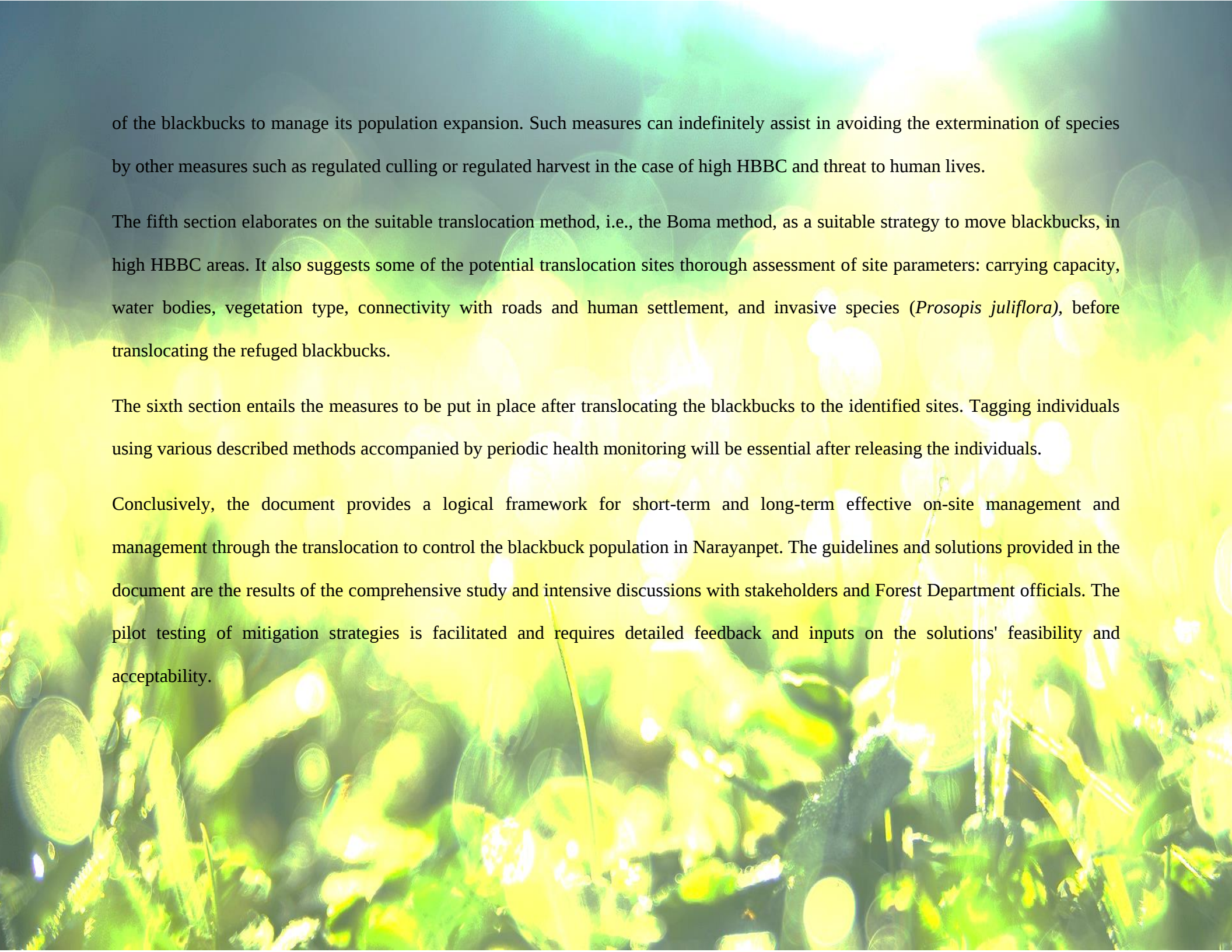
The integrated management plan is divided into six sections. The first section presents the overall population density, age structure, distribution, and dynamics in the affected areas of Narayanpet. The overall blackbuck population across all the affected mandals in Narayanpet was found to be 1481 individuals. Among the major habitats, i.e., cotton-paddy and jowar, the density of blackbucks were 1.08 and 0.8 per sq km. Makthal mandal reflected the highest number of individuals compared to all the affected mandals, followed by the highest male-to-female sex ratio. Contrastingly, Krishna mandal showed the least number of individuals. The population of blackbucks across all the mandals was female-biased.



The second section represents the cropping pattern transition and the crop damage posed by blackbucks in all the affected mandals. The secondary data analysis demonstrated that the percentage of rainfed crops, i.e., castor, sunflower, and millet, considerably declined and was later shifted to other predominant crops, i.e., paddy and cotton, in the year 2022. The expansion in the agrarian land led to increased instances of crop damage across the affected mandals. Crops like cotton and red gram were worst affected in all the mandals, and the Krishna mandal showed the highest damage. The paddy yield was also severely impacted in Narwa and Utkoor mandals.

The third section discusses the benefits and limitations of the traditional methods, i.e., human effigies, used sarees, fencing, guarding, guard dogs, etc., that farmers employ to mitigate damage in Narayanpet. The section further proposes suitable onsite management strategies and solutions, i.e., high-density polyvinyl fencing at a recommended height of eight feet, solar-powered fencing, biological fencing (e.g. *Sesbania* fencing), and community conservation that could be immediately deployed to ameliorate the damage and uproar among the farming communities.

The fourth section of the document represents preliminary attributes of the potential rehabilitation site covering an area of 73.5 acres identified in Krishna mandal by the Forest Department to establish the Blackbuck Rehabilitation Center (BBRC). The generation of the center will ensure refuging a few blackbucks to conduct scientific procedures like chemical contraception, to regulate the fertility of



of the blackbucks to manage its population expansion. Such measures can indefinitely assist in avoiding the extermination of species by other measures such as regulated culling or regulated harvest in the case of high HBBC and threat to human lives.

The fifth section elaborates on the suitable translocation method, i.e., the Boma method, as a suitable strategy to move blackbucks, in high HBBC areas. It also suggests some of the potential translocation sites thorough assessment of site parameters: carrying capacity, water bodies, vegetation type, connectivity with roads and human settlement, and invasive species (*Prosopis juliflora*), before translocating the refuged blackbucks.

The sixth section entails the measures to be put in place after translocating the blackbucks to the identified sites. Tagging individuals using various described methods accompanied by periodic health monitoring will be essential after releasing the individuals.

Conclusively, the document provides a logical framework for short-term and long-term effective on-site management and management through the translocation to control the blackbuck population in Narayanpet. The guidelines and solutions provided in the document are the results of the comprehensive study and intensive discussions with stakeholders and Forest Department officials. The pilot testing of mitigation strategies is facilitated and requires detailed feedback and inputs on the solutions' feasibility and acceptability.