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## Rethinking Human-Macaque Conflicts in Urban Wildlife Sanctuaries: A Case Study from New Delhi, India

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Abstract: This study is part of a project to develop an integrated management plan for Asola Bhatti Wildlife Sanctuary, New Delhi by involving the local community in developing management and conflict mitigation strategies. Reconnaissance surveys revealed severe human-Rhesus macaque conflicts in the periphery of the sanctuary, showing the limitations of previous mitigation strategies. To understand the complexity and depth of these conflicts, a conceptual framework is adopted to categorize conflicts into three 'Dispute, Underlying conflict and Deep-rooted conflict' levels. A social survey was conducted from April to June 2024 with 200 household interviews, measuring the depth of conflict through Likert scale responses across five categories, viz. perceptions about species, conflict situation, past mitigation efforts, engagement willingness and views on involved authorities. Quantitative analysis using Pearson's chi-square test and conditional inference tree analysis is used to identify key predictors of community attitudes, such as cultural beliefs and past negative interactions with macaques. Likert scale responses were measured through composite indices to provide a comprehensive assessment of conflict levels. The study found that encounters are frequent and occur daily (88%), leading to property damage (44.5%), increased workload (93%) and physical harm (39%). Religious beliefs within the community have shaped a positive attitude towards macaques (49%), while the aggressive behavior of macaques has negatively influenced attitude (19.5 %). Provisioning is also significantly influenced by religious beliefs (53.2%). The majority of the respondents expressed significant dissatisfaction with the authorities involved (67.5%) and perceived the conflict as severe (64%), and emphasized the need for better and urgent intervention. The Overall composite indices (OCI = 1.632) reveal that conflicts are primarily at the 'Underlying level' [whereas higher in Perceptions (OCI = 2.445) and Situation (OCI = 2.09) indicates deep-rooted conflicts and lower in History (OCI = 1.15), Willingness (OCI = 1.145) and Views (OCI = 1.33) indicating Disputes]. The underlying conflict cannot be resolved by practical solutions alone, therefore, emphasis must be given on building relationships among stakeholders to address conflict proactively at their source. This underscores the need for targeted, level-specific interventions, such as practical measures for disputes and reconciliation dialogues for deep-rooted conflicts.

Keywords: conflict mitigation, community engagement, integrated management, conservation

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