

Development and Implementation of Participatory Planning Workshops for Human-Wildlife Coexistence in Shared and Spared Landscapes Through a Transdisciplinary Perspective

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Habitat fragmentation resulting from deforestation, driven by the advance of agribusiness, mining activities, and neo-ruralism, has intensified human–wildlife interactions. These relationships are generally framed through a conflict-based lens, despite also encompassing symbolic, affective, and sociocultural dimensions that remain largely unexplored by conservation biology. In this context, human–wildlife coexistence has emerged as an approach to understanding this relational complexity and fostering a dynamic and sustainable state in which humans and wildlife co-adapt to share territory, while maintaining risks within socially acceptable limits. Protected areas represent promising socioecological systems for acknowledging and addressing such complexity, as their management depends on multi-stakeholder engagement, including academic, community, administrative, governmental, and non-governmental actors. The project “Transdisciplinarity for human–wildlife coexistence in shared and spared landscapes” has sought to respond to this challenge through transdisciplinary strategies aimed at strengthening bottom-up socio-environmental governance. This study reports and analyzes the role of Participatory Planning Workshops carried out within the project as collaborative actions for fostering coexistence. The analysis focuses on the workshops held in the São Francisco Xavier Environmental Protection Area (APA-SFX) in November 2024 and in the Santa Virgínia Nucleus of the Serra do Mar State Park (PESM-NSV) in July 2025, each lasting three days. Participants were selected based on recommendations from protected area managers, prioritizing those with direct or indirect involvement in the territories. Each workshop included participatory mapping of perceived human–wildlife interactions through an Interaction Diagram, followed by the development of a socioecological system outlining the causes and consequences of these interactions, as well as the social, environmental, cultural, and institutional factors that influence them. Ultimately, a collectively developed Theory of Change was established, outlining shared goals, strategic actions, and indicators to guide future coexistence-oriented interventions. In both protected areas, conflicts with wild boars and feral pigs were identified, including crop damage, impacts on native vegetation, and concerns over species range expansion. Recurrent discussions also addressed hunting, wildlife trafficking, predation of domestic animals, roadkill, and zoonotic disease transmission. Specific concerns in APA-SFX included bird–window collisions, improper beekeeping, unintentional wildlife feeding, and frequent presence of wild animals in urban areas. In contrast, participants from PESM-NSV highlighted positive human–wildlife interactions, particularly the observation of birds and mammals, which are valued for their aesthetic and ecotourism appeal. The proposed actions in both workshops converged on the importance of environmental education, coordination among residents, institutions, and management councils, as well as the implementation of technical solutions to mitigate conflicts. However, while APA-SFX prioritized urban infrastructure to reduce direct impacts, PESM-NSV emphasized territorial governance and the strengthening of co-responsibility in management. The incorporation of

these actions into management plans, already underway in APA-SFX, has yielded promising early results, with the potential to inform coexistence strategies and reinforce socio-environmental governance in protected landscapes.

Keywords: Community Engagement; Knowledge Co-production; Participatory Decision-making; Practice-based Insights; Socio-environmental Conflict.