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"Reconcile land system changes with planetary health"

## Navigating opportunity spaces: Understanding behavioural change towards agroecological transitions in Mandla, India

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## Abstract

Transforming agri-food systems towards sustainability and resilience is critical for addressing global challenges such as climate change, food insecurity, and environmental degradation. However, fostering such transitions requires a deep understanding of how different actors exercise agency within the constraints and possibilities of their local environments. This study examines how actors in Mandla district, Madhya Pradesh, India—where farming is predominantly rainfed and based on rice, wheat, and pulse cultivation—are engaging with emerging agroecological initiatives. These include practices such as intercropping, reduced chemical input use, and soil and water conservation, often embedded in local collective efforts like Self-Help Groups and Community Nutrition Gardens.

This study focuses on the concept of opportunity spaces—the range of actions perceived as possible and desirable by actors—shaped by interlinked structural subsystems: resource availability, governance arrangements, market dynamics, and social-relational networks. Grounded in the conceptual framework of agency in food systems transformation (ACT framework) (Freed et al., 2024), this research adopts a qualitative case study approach to unpack the multi-scalar dynamics of individual and collective action. Primary data were collected through 20 semi-structured interviews, four focus group discussions, and participant observations conducted from November 2024 to February 2025.

Preliminary findings indicate that while individual motivations—such as concerns about environmental degradation and aspirations for family and community well-being— drive the adoption of agroecological practices, addressing systemic constraints often necessitate collaboration among various actors and collective action . Some practices, such as diversified cropping systems, depend largely on individual decision-making, while addressing issues like water management or political representation requires collaborative strategies. Local institutions and community-based groups enhance knowledge exchange, enable resource access, and foster inclusive participation. Actors' opportunity spaces to address these constraints are co-shaped by social-relational power dynamics within resource access, institutional engagement, and economic subsystems.

The study contributes to a deeper empirical understanding of agency as a situated and relational phenomenon and highlights the importance of interventions that actively

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expand opportunity spaces. It provides critical insights for designing participatory, inclusive approaches that bridge behavioural drivers with systemic transformation pathways in agroecology.

**Keywords:** Agency, agroecology, behavioural change, collective action, community nutrition gardens, governance, India, opportunity spaces, rural institutions, self-help groups, social-ecological systems