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"Competing pathways for equitable food systems transformation: Trade-offs and synergies"

## Games for social learning: Triggering collective changes in commons management

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## Abstract

As resource users interact and impose externalities onto each other, institutions are needed to coordinate resource use, create trust, and provide incentives for sustainable management. Coordinated collective action can play a key role in enabling communities to manage natural resource commons more sustainably. But when such collective action is not present, what can be done to foster it? And can this be done at scale? This paper examines the potential to adapt behavioural games as a structured, replicable approach to facilitate the emergence of sustainable commons management at scale. In the past, researchers have used behavioural games to study cooperation patterns of communities. Recently, games have been adapted as learning and stakeholder engagement tools to improve management of the commons, strengthen self-regulation of resource use and enhance constructive interaction of resource users. Combining games with other interventions and tools and facilitated discussions has been proposed as a promising approach to improve collective action institutions through experiential learning. This paper aims to improve the understanding of how experiential learning through games can contribute to behavioural change, potentially leading to more sustainable commons management. We first develop a conceptual framework for structuring the reflection on games as experiential learning interventions. We then apply the framework to synthesize the lessons learned from applying three experiential learning games to trigger behavioural change in India. This should help to identify the potential and strategies for scaling up the use of games for individual and social learning in commons management. We conclude that games have potential as intervention tools for sustainable resource management, but to achieve that potential, careful attention to underlying behavioural assumptions in using games is urgently needed in research, policy, and design of interventions.

**Keywords:** Behavioural change, facilitation tools, forest, india, sustainable natural resource management, water

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