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Embedding climate services in coffee smallholder realities: A broadened conceptual framework for effective interventions

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Abstract

Climate change is a lived reality for smallholder coffee farmers around the globe. Many farmers already react through farm and household level everyday adaptation; meanwhile coffee value chain actors often push for climate adaptation projects that focus on ensuring consistent quality and supply of coffee. Thus, in the context of price-volatile coffee markets and unequal value chain relationships, climate resilience needs to be thought more broadly to avoid risking maladaptation.

Building on a targeted engagement with literature on smallholder-decision-making, the socio-political dimensions of climate resilience, and (coffee) climate adaptation governance, we developed a framework through an iterative process that combined insights from the literature with reflections from practice-based experiences in global coffee climate adaptation projects. Core dimensions of climate adaptation in smallholder contexts were identified and integrated into an analytical lens that captures how farm-level decision-making, everyday adaptation practices, and externally driven adaptation initiatives interact. To illustrate its explanatory power, the framework is applied to a set of illustrative cases of perceived “paradoxes” encountered when trying to advance climate resilience in coffee farming contexts.

The three core elements of the framework - coffee, climate change, and the general household - help refocus interventions toward supporting holistic resilience and economic development at the household level. The attention paid to the different time scales relevant to each of these elements then also stresses the longitudinal importance, unfolding as overlapping farm-level management timescales, climate change expressing itself through multiple stressors over time, and the time dimension of the yearly and generational cycles related to the farming household. Our framework advances the understanding of climate adaptation in smallholder coffee farming contexts. It allows to discuss adaptation beyond the main cash crop, coffee in this case, and therefore takes a farmer - rather than company focused - point of view, putting the local livelihoods at the center of any intervention and thereby contributing to the literature around transformational, in the understanding as development-orientated, adaptation with high relevance for both coffee production- and development-orientated actors. Lastly, the integration of conceptual reflection with adaptation-orientated climate services is of high relevance to smallholder-focused adaptation processes.

Keywords: Climate adaptation, climate information services, household, maladaptation