

Peer Review

Review of: "Revitalizing Key Conditions and Integrated Watershed Management to Mitigate Land Degradation and Sustain Water Availability for Agriculture in Semi-Arid Regions: A Case Study of Ethiopia"

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This review provides a comprehensive and policy-relevant synthesis of soil erosion–induced land degradation and integrated watershed management (IWSM) experiences in Ethiopia, effectively linking biophysical processes, institutional bottlenecks, and livelihood outcomes. The manuscript’s strengths lie in its extensive literature coverage, detailed presentation of empirical success stories (e.g., Tigray watersheds), and its structured identification of five major constraints alongside clearly articulated “key conditions” for revitalization. The integration of hydrological principles with socioeconomic dimensions is particularly valuable for semi-arid regions. However, the paper would benefit from stronger methodological rigor in the “systematic review” component (e.g., explicit search strategy, inclusion/exclusion criteria, timeframe, PRISMA-style flow, quality appraisal of sources), as well as clearer differentiation between empirical evidence and author field observations. The manuscript is overly descriptive in places and could be strengthened by synthesizing findings into comparative analytical tables (e.g., effect sizes, percentage improvements across watersheds) and by reducing repetition. A quantitative meta-summary (ranges, medians, confidence where possible) would enhance scientific robustness. Additionally, clearer conceptual framing of IWSM (perhaps through a schematic theoretical model early in the paper), sharper policy recommendations with prioritized action steps, and a brief limitations section would increase academic impact. Streamlining language, shortening redundant

background sections, and tightening conclusions to emphasize novel contributions beyond existing reviews would further improve clarity and suitability.

Declarations

Potential competing interests: No potential competing interests to declare.