

Review of: "Revitalizing Key Conditions and Integrated Watershed Management Approach to Sustain Water Availability and Agriculture in Semi-Arid Regions"

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Potential competing interests: No potential competing interests to declare.

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Management Approach to Sustain Water Availability and Agriculture in Semi-Arid Regions"

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Introduction

Understanding causes and challenges of land degradation and suggesting key solutions of integrated watershed management (IWSM), even though not new in the literature, is still an important research question. Indicating type of review process and specific procedures followed could have been important (more on this later). I have some general and specific comments as indicated below.

General comments

My general comments are as follows:

1. Literature review, systematic or otherwise, is important for getting new results. However, it is important that the results are replicable. The author could clearly put the review procedure followed in the study.
2. Focusing on arid and semi-arid may be too broad. Choosing a case study could be helpful for the reader. The case in point may not explain the Ethiopian/Tigrayan context very well. At least the authors can explain if arid and semi-arid category explains the Ethiopian context explains it well. Important is also if the author explains 1. Why there are few success stories (in Ethiopia or elsewhere) but many failure stories? 2 Justifying why IWSM is needed. Link land degradation to improved ecosystem services (countering desertification is a bit of overstretch. I presume)
3. Sustainable catchment rehabilitation may go beyond IWSM. But the review didn't venture into market-based ecosystem services (payment for ecosystem services and others) as a means of sustaining watershed conservation.
4. Differentiating proximate and underlying causes of land degradation is important to understand causes of land degradation and proposing lasting solutions.
5. Many of the literatures cited are relatively old; the author needs to update the literature
6. English editing could be important.

Specific comments

1. P. 7 Sustainable watershed rehabilitation may also need the involvement para-statal agency or the private sector, establishing some sort of PES scheme.
2. While listing the challenges of watershed rehabilitation (p.8), I wonder if absence of incentives to induce sustainable rehabilitation and some sort of benefit sharing (involvement of downstream users in the rehabilitation process) through design of PES scheme may ensure sustainable funding, in turn ensuring sustainable watershed rehabilitation.
3. P .8. I didn't understand what it means 'cash dependent mentality'
4. P.8 While listing down the stakeholders in a given watershed, it sounded like actors of PES scheme, would it be possible to think in that direction?
5. Promoting various nature-based solutions (NBS) could be important. One of the critical policy elements is ensuring tenure security. I feel that this is a major omission while discussing policy and legal solutions.

Overall suggestion

The prevalence of land degradation and its consequent onsite and offsite effects may require some sort of paradigm shift to redress what is going on. I welcome the paper indicates that the current approach (in the name IWSM or not) is not working but it requires going beyond what is suggested in this paper. I suggest this manuscript to be publishable with major review according to the comments indicated above.