

Interactive comment on “Reversing land degradation through grasses: a systematic meta-analysis in the Indian tropics” by Debashis Mandal et al.

Anonymous Referee #2

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Reversing land degradation through grasses: a systematic meta-analysis in the Indian tropics Solid Earth Discuss., doi:10.5194/se-2016-143, 2016 Comments to the author Land degradation through desertification produces many negative ‘on-site’ and ‘off-site’ effects, especially during intense seasonal rainfall events. Often substantive topsoil removal occurs by flowing water, leading to decreased soil quality, nutrient loss and reduced infiltration, which produces a positive feedback by increasing run-off and hence further accelerating soil erosion. The present manuscript deals with the topic which critically analyzes the effect of grasses in reversing the process of land degradation. Grass species have tremendous potentialities in soil conservation as it has a great binding influence on soil particles. The authors clearly spell out the advantage

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of vegetative barriers of *Pennisetum purpureum* and *Saccharum munja* in controlling soil loss due to water erosion and also it checks the loss of soil carbon due to erosion. The manuscript revealed that by managing the grassland with cut & carry system, rotational grazing and control grazing can greatly reduce the water and soil loss and helps in the reversing the land degradation process. Few points which need attention are mentioned below. 1. The abstract should start with the introductory remark and should end with the concluding remark. 2. There are few typographical errors which need correction. Authors are requested to check the entire manuscript for typographical error. 3. Data on soil moisture storage, erosion aspect and carbon sequestration/build up may be strengthened in result and discussion section. Comments to the editor

In my opinion, the manuscript addresses a topic which should be of general interest to readers of Solid Earth Discussions. As it stands the interpretation is basic and the way the information is presented is good. The paper generates some useful information on efficacy of vegetative barriers for controlling/reversing land degradation. The manuscript is well written. Looking into the quantum and quality of data, the manuscript should be published in Journal of Solid Earth Discussions.

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-143, 2016.

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