



Effectiveness of exclosures to control soil erosion and local community perception on soil erosion in Tigray, Ethiopia

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The study investigated how effective exclosures are in the fight against soil erosion and how they are perceived as a means to control soil erosion by the local community (farmers and local experts). The universal soil loss equation (USLE) used to estimate potential soil erosion. Data on local community perception obtained from a survey of 62 farm households and five local experts. In-depth interview, group discussion and non-participant field observation also carried out to obtain additional information. The USLE results agreed with the farmers' (67%) and local experts' opinion that erosion at study area is severe and affects the quality of lives of residents. Insignificant difference ($p > 0.05$) was observed in the estimated soil loss among treatments. However, the estimated soil loss from free grazing lands was higher by 47% than soil loss from exclosures which illustrated that exclosures are effective to control soil erosion. The majority of farmers (70%) also rated exclosures effectiveness to control soil erosion as high. Local communities were optimistic about the chances to rehabilitate degraded lands and make them productive. The majority of farmers (60%) did not consider population growth as a cause of soil erosion. For the majority of interviewed farmers, poor land management is more important. Efforts to create awareness within the rural communities should focus on the link between high population growth, environmental degradation and poverty. The optimistic view of local communities can be considered as an asset for the planning and development of degraded lands rehabilitation efforts.

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